



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/729,091

12/05/2003

Sudheep Gupta

139170

8830

24587

7590

05/27/2008

ALCATEL LUCENT

INTELLECTUAL PROPERTY & STANDARDS

3400 W. PLANO PARKWAY, MS LEGL2

PLANO, TX 75075

EXAMINER

HOANG, DANIEL L

ART UNIT

PAPER NUMBER

2136

MAIL DATE

DELIVERY MODE

05/27/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/729,091

**Applicant(s)**

GUPTA ET AL.

**Examiner**

DANIEL L. HOANG

**Art Unit**

2136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 6, 7 and 9-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 6, 7 and 9-15 is/are allowed.
- 6) ☒ Claim(s) 16-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **CLAIMS PRESENTED**

Claims 1-3, 6-7, and 9-20 are presented.

### **RESPONSE TO ARGUMENTS**

Applicant's arguments pertaining to claims 1-3, 6-7 and 9-15 have been considered and are persuasive.

Amended claim 1 successfully includes the limitations of the previously objected claims 4, 5, and 8.

Independent claim 1 is thus deemed to contain allowable subject matter. Accordingly, dependent claims 2-3, 6-7, and 9-15 are also considered allowable.

Applicant's arguments pertaining to claims 16-20 have been considered and are not persuasive.

Amended claim 16 does not include all limitations of the previously objected claims. Claims 16-20 are rejected below.

### **CLAIM REJECTIONS**

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US Patent No. 5,974,052), in view of Blanchard (US Patent No. 6,081,600), and further in view of Kollmyer (US Patent No. 7,165,175).

Art Unit: 2136

**As per claim 16:**

In a method of communicating in a signaling network in which signaling messages are communicated between signaling points of the signal network, an improvement of a method for selectably encoding at least portions of a signaling message communicated by way of a first selected signal point to at least a second selected signal point, said method for selectably encoding comprising:

selecting, responsive to delivery of the signaling message at the first selected signal point, which portion, if any, of the signaling message to encrypt;

selectably encrypting, responsive to selection made during said operation of selecting, the portion, if any, of the signaling message; and

maintaining an index that comprises indicia associated with an originating node that originates the signaling message, and with an identifier that identifies the second selected signal point to which the signaling message is to be forwarded, wherein at least one of the originating node and the identifier are indexed together with values representative of which if any, portion of the signaling message is to be encrypted; and thereafter

forwarding on the signaling message to the second signal point.

**Johnson teaches:**

A signaling network in which signaling messages are communicated between signaling points of the signaling network (see fig. 1). Johnson's invention does not explicitly teach that the signaling messages can be separated into portions. Johnson also does not teach explicitly teach how the portions may be encrypted.

**Blanchard teaches:**

The communication of messages in which he explains are carried in fundamental data packets.

Blanchard further teaches that said data packets contain a message payload portion. The payload

Art Unit: 2136

contains message content which further comprises signaling data and traffic data (see col. 1, paragraph 3). It would have been obvious at the time of the invention to one of ordinary skill in the art to which the subject matter pertains to combine the teachings of the Johnson reference and the teachings of the Blanchard reference in order to separate signaling data so that only essential signaling units from a signaling data stream need to be transporting across the network as taught by Johnson. Although both the Johnson and the Blanchard invention both cite encryption/decryption capabilities, they do not explicitly teach encryption selectors or encryptors adapted to receive indications of signaling messages and selectively encrypting portions of the signaling message.

**Kollmyer teaches:**

A system that is operable to parse and selectively encrypt and decrypt encrypted data (see col. 5, paragraph 2). It would have been obvious at the time of the invention to one of ordinary skill in the art to which the subject matter pertains to combine the teachings taught above by Johnson and Blanchard with the teachings taught by Kollmyer in order to discriminately encrypt data so that any data that does not need to be encrypted isn't which leads to less computational load on the system as a whole.

Kollmyer further teaches data traffic traversing the network may or may not be encrypted depending on the destination of the traffic and whether or not it is in a safe zone by virtue of not being exposed to the outside network. Therefore data traveling to certain destination addresses that reside outside of the internal network may need to be encrypted in order to be made secure (see col. 6, paragraph 2). It would be obvious to keep track of internal and external destinations so that the system can be aware of when encryption may be necessary. It would be obvious to one of ordinary skill in the art to which the subject matter pertains at the time of the invention to keep track of such information in a database/index.

**As per claim 17:**

The apparatus of claim 16 wherein the signaling network comprises an SS7 signaling network, wherein the first selected signal point comprises a first signaling transfer point and wherein said encryption selector and said encryptor are embodied at the first signaling transfer point.

*[see Johnson, fig. 1]*

**As per claim 18:**

In the signaling network of claim 16 further including apparatus for selectably decoding the signaling message, said apparatus comprising:

a detector adapted to receive indications of the signaling message, said detector for detecting which, if any, part of the signaling message is encrypted; and a de-encryptor adapted to receive indications of detections made by said detector and to receive indications of the signaling message sent to the second selected signal point, said de-encryptor selectably for de-encrypting the encrypted portion, if any, of the signaling message.

*[see Blanchard, fig. 4]*

**As per claim 19:**

The apparatus of claim 18 wherein the signaling message is delivered to said detector and to said de-encryptor by way of an untrusted communication path.

*It is clear that if the message is encrypted, then the communication path is insecure or untrusted.*

**As per claim 20:**

The apparatus of claim 18 wherein said encryptor encrypts the portion of the signaling message pursuant to a public-key encryption scheme.

*As per applicant's disclosure, existing schemes and encryption techniques are generally well known. It would have been obvious to one of ordinary skill in the art to which the subject matter pertains to encrypt using a public-key encryption scheme.*

***Allowable Subject Matter***

Claims 1-3, 6-7 and 9-15 are allowed.

***POINTS OF CONTACT***

- \*. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

- \*. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L. Hoang whose telephone number is 571-270-1019. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Daniel L. Hoang/

Examiner, Art Unit 2136

Art Unit: 2136

/Nasser G Moazzami/

Supervisory Patent Examiner, Art Unit 2136